

2003 Transportation Summit Planning Team

Experts Comment on

SAFETY

SAFETY

October 6, 2003

8:30 a.m. to 4:30 p.m.

Secondary Center, Lake Michigan Conference Room, Lansing, MI

AGENDA

WELCOME

Facilitator: Kirk Steudle, MDOT Chief Deputy Director

Discussion Moderators:

Larry Tibbits, MDOT Chief Operations Officer

Frank Cardimen, ITS Michigan/TIA

Kathy Farnum, Office of Highway Safety Planning

EXPERTS SPEAKING ON THE ISSUES

National Update

Rudy Umbs, Chief Highway Safety
Engineer, Federal Highway Administration

Michigan Transportation Crash Profile

Lidia Kostyniuk, Research Scientist,
University of Michigan Transportation Research Institute

Michigan Crash Data Solutions

Jack Benac, Project Manager, MDOT

Statewide Safety/Working Together

Larry Tibbits, Chief Operations Officer, MDOT
Brian Zimmerman, Work Zone Technical Administrator,
MDOT

Impacting Driver Issues

Anne Readett, Public Information Specialist, State Police
(Office of Highway Safety Planning)

Local Issues & Solutions

Frank Cardimen, Executive Director/President, ITS
Michigan/TIA

Governors Traffic Safety Advisory Commission /Statewide Coordination

Kathy Farnum, Planning Development Grant Manager,
State Police (Office of Highway Safety Planning)

PLANNING ITEMS

Planning Team's Comments on the Issues

Drafting the Issues, Goals and Action Plans

National Update

Expert Speaker: **Rudy Umbs, Chief Highway Safety Engineer
Federal Highway Administration**

- National Update**
- Rudy is the safety advocate at the national level.
 - His career in transportation safety started in Michigan and expands 33 years.
 - Rudy has received various awards on safety issues.
 - Nationally, repeating safety issues that Michigan has done back in the 1970s.
 - Michigan is the only state in the nation who has consistently reduced the number and rates of fatalities.
 - Safety needs to be integrated through everything.
 - Critical aspect of transportation safety issues is land use.
 - Due to the need for mobility, we need to focus on moving people safely.
 - Important to get the word out on safety.
 - If you don't have a transportation system that delivers you don't have a viable economy.
 - Safety planning and MDOT work very well together.
 - Safety doesn't cost that much to go first class in safety.
 - Planning safety in the beginning makes the big difference.
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- Number of Persons Killed in Motor Vehicle Crashes, by Year**
- Graph of **Number of Persons Killed in Motor Vehicle Crashes, by Year** from 1988 to 2002.
 - 1990 there were 44,599 people killed.
 - 2002 there were 42,850 people killed.
 - Nationally we have reached a plateau over the last few years.
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- Persons Killed in Motor Vehicle Crashes per 100 M VMT, by Year**
- Graph of **Persons Killed in Motor Vehicle Crashes per 100 M VMT, by Year** from 1988 to 2002.
 - Consistently decreasing or no change from year to year.
 - The level off rate has stayed at 1.5%.
 - Contend that this is a mind set.
 - We can do better.
-

- Where Fatalities Occur By Roadway Functional Class - 2001 data**
- **Where Fatalities Occur By Roadway Functional Class - 2001 data** - pie chart of number of fatalities on different roads.
 - Graph of Fatality Rate per 100M VMT (1998).
 - The numbers and rates on different types of the Nation's roadways.
 - Arterials have lots and lots of issues.

**Michigan's
Transportation
Crash Profile -
Lidia Kostyniuk,
UMTRI**

- Lidia and others will look at the data and how it applies in Michigan.
- They will look at how Michigan fits into the whole system.
- If you don't have specific problems in a certain area don't spend money on it.

**Partnering to
Achieve
Highway Safety
Goals**

- **National Entities – Common Goal of 1.0 Fatalities / 100M-VMT by 2008**
- **US DOT: NHTSA, FHWA, FMCSA**
- **AASHTO: June 2003**
 - **Some Member States Advancing**
- **GHSA: August 2003**
- **AAMVA: August 2003**
- Looking for 1.0 fatalities.
- This would be a record.
- Many organizations have come on board.
- There is a national movement for providing safety.

**FHWA Focus
Areas: Major
Factors
Contributing to
Fatalities**

- **Single Vehicle Run-Off-Road - 40 %**
- **Speeding Related - 32 %**
- **Intersections - 21 %**
- **Pedestrian and Bicyclist - 13 %**
- *(% of fatalities with these characteristics; source: 2002 FARS data)*
- Although Federal Highway Association (FHWA) provides the leadership and program to reduce many types of crashes, our strategy remains to place emphasis on providing leadership, programs, and technologies to address safety needs aimed at reducing the types of crashes which claim the most lives.
- We believe we can reduce highway deaths more quickly with this focused approach; both in urban and rural areas.

**SAFETEA
Safe,
Accountable,
Flexible, and
Efficient
Transportation
Equity Act of
2003**

- Continuing resolution is in legislation.
 - President signed the bill and Congress worked together to keep the program.
 - Took the legislation for TEA and continued for another month, along with another continuation until around the 29th of February 2004.
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- Surface Reauthorization**
- 6-year, \$247 B for highway, safety and transit; continues highway funding guarantees
 - Builds upon Secretary's principles and decisions revealed in February's FY04 Budget Plan
 - Highways: Strong funding for core Federal-aid, including Federal Lands, Research
 - Money available for safety in the 6-year bill.
 - Start safety at the early planning stages – look forward to where we should be.
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- Key Issues & Considerations for Safety Reauthorization**
- **Fatality and Injury Numbers on a "Plateau":** What new opportunities are out there to restore progress?
 - **Data:** Quality, Timeliness & Value to Countermeasure Development & Safety Conscious Planning
 - **Needs of Localities:** Significant Part of Problem Is on Local Roads
 - **Special Issues:** Growing Concern re/ Intersections as High-Crash Location (aggressive driving, traffic control & enforcement issues); Older Driver Issues; etc.
 - In 1924, Larry Tibbitts and Rudy was at the original conference – when Herbert Hoover was Secretary of Commerce at the time.
 - Need better data.
 - Problem of safety is at the local level.
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- \$\$\$\$\$\$**
- Record \$201B for highway and *safety* programs and nearly \$46B for transit
 - Up \$29B from the \$218B of TEA-21
 - Lives within the means of HTF revenues
 - *More than doubles safety - from \$3.9B in TEA-21 to \$8.6B.*
 - Money – more than double what was available before.
 - It is really about getting involved in the early planning stages.
 - Easier to change in the planning stage – before concrete is set.
-

| SAFETEA Doubles Funding for Safety Programs (Billion \$) | TEA-21 | SAFETEA |
|---|---------------|----------------|
| Safety | 3.972 | 8.632* |
| Operation Lifesaver | .003 | .004 |
| Bike / Ped | --- | .003 |
| Fed. Lands Safety | --- | .240 |
| State Border Insp. | --- | .047 |
| Blue Ribbon Comm. | --- | .007 |
| Safety Belt Incentive | .500 | --- |
| .08 BAC Incentive | .500 | --- |

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| | | |
|---------------------|--------------|---------------|
| NHTSA | 1.979 | 3.415 |
| FMCSA | .644 | 2.829 |
| Total Safety | 7.598 | 15.177 |

- **Includes Minimum Guarantee w/ HSIP*
 - Table shows breakdown of where we were in TEA-21.
 - President and Secretary of State are interested in moving safety forward.
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Key Messages:

- **Built upon Safer, Simpler, Smarter theme**
 - **Improves highway safety and helps grow the Nation's economy without costly new taxes**
 - **Helps ensure transportation projects are completed on time and within budget, while protecting the environment**
 - **Retains overall program structure while increasing flexibility by eliminating most discretionary programs**
 - Simpler federal regulations.
 - Simpler for governors, representative offices, the state, etc.
 - Overall program that will give the states more and more control and where they have their safety problems.
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**Key Message:
More Than a
Spending Plan**

- **Key blueprint for investment**
 - *Comprehensive safety initiative to save more lives*
 - **Create jobs and sustain economic growth**
 - **Reduce congestion and minimize project delays**
 - **Empower local decision makers by increasing funding flexibility**
 - **Increase environmental stewardship and protections**
 - **Increase transit efficiency for a more seamless transportation network**
 - **Enhance infrastructure investment**
 - Need to get into the AASHTO strategic plan.
 - Michigan has been involved in the safety plan all along.
 - Bringing own expertise to the table to work together.
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**A
Comprehensive
Safety Initiative
to Save Lives**

- **Establishes a new performance-based core highway safety program built on State data driven planning**
- **Provides incentives to enact primary seat belt laws that will greatly increase use**
- Data driven.
- Where does the data say we should put our money?
- In 1980 there was a conference providing safety in the age of diminishing resources.
- We did a lot with nothing or we did nothing with a lot.
- It's the thinking and planning that makes the difference.

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- Secretary of State Richard Austin wanted to be the first state to have the seat belt law – Michigan was the 3rd state.
 - #1 recommendation – something we could do right away.
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State Strategic Highway Safety Plan

- **States Encouraged to Create Comprehensive Strategic Highway Safety Plan**
 - **Comprehensive**
 - **Address 4E's of Safety: Engineering, Education, Enforcement and Emergency services**
 - **Full Roadway Network**
 - **Data-Driven with focus on addressing State & Local Needs**
 - **Based on collaborative process - State DOT, GR, State rail safety administrator, and other major safety stakeholders**
 - **Includes Safety-Conscious Planning**
 - Rural areas have a need for emergency services.
 - In the metro areas due to road conditions, traffic signals, etc. it took more time to drive the hospital than to walk.
 - Safety conscious planning.
 - SEMCOG is the leader in safety conscious planning.
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Funding Flexibility

- **Focus Funds on State-Specific Safety Needs**
 - **With Strategic Highway Safety Plan**
 - **May use up to 50% of HSIP funds for Sec. 402 purposes, if consistent with State's Strategic Highway Safety Plan.**
 - **Also may use Sec. 402 for HSIP purposes:**
 - **50% performance grant funds**
 - **50% safety belt use grants**
 - **100% safety belt primary law grant**
 - All sorts of different ways of how to manipulate the money.
 - Different grants available.
 - Basic thing with federal money – states decide where to put the money.
 - Put the money where it will do the most good.
 - What type of solution should be done?
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HSIP Funding

- **Funds from Highway Trust Fund**
 - **Funds apportioned according to current STP formula**
 - **½% Minimum**
- **Eligibility**
 - **Includes existing Sections 152 and 130**
 - **Flexibility to fund proactive safety activities and safety conscious planning**
- **Federal Share - 90% (100% for RRXing)**

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- A lot of money available.
 - Very effective.
 - Program continues for both intersections, run off the road.
 - A lot of the safety money is at 100%.
 - Infrastructure its at 100%.
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**New Safety Provisions
National Highway Safety Goal - Sec. 1401**

- **Creates a “Blue Ribbon” Commission**
 - **Identify Comprehensive National Highway Safety Goal**
 - **Engineering, Education, Enforcement and Emergency response – 4 “E”s**
 - **Based on evaluation of national safety needs, analysis of achievable improvements**
 - **Recommend specific measures for achieving the goal**
 - **“Shared” Nature of Goal is Key**
 - It was such a good idea in 1924 that someone came up with it again.
 - Panel will do just what we have been doing here.
 - Nationally set up a vision for safety.
 - Take our program nationally.
 - Evaluations will be a big factor.
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**NHTSA-Administered Programs
NHTSA-Administered Programs**

- **Highway Safety Grants**
 - **State & Community Formula Grants**
 - **Performance Grants**
 - **General Performance Grants**
 - **Primary Safety Belt Use Law Grants**
 - **Safety Belt Use Rate Grants**
 - **Impaired Driving Grants**
 - **State Traffic Safety Information System Improvement**
 - **Others: Emergency Medical Services, National Driver Register, Safety R&D**
 - The Governor’s representatives will be under the NHTSA program.
 - In Michigan this has been a real plus – educated the engineers.
 - Incorporate safety in their process.
 - Money available for a track record system.
 - Identify where problems are.
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Increasing Safety Belt Use Rates & Primary Safety Belt Laws

- **Primary Safety Belt Use Grants = \$100 M/Year**
 - **States with primary law before Dec. 31 2002**
 - **Receive in FY 04 and 05 equal to ½ of their basic formula grant**
 - **States with primary law after Dec. 31 2002 or having 90% use rate in prior FY**
 - **Receive one time equal to 5 times of their basic formula grant**

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- If you pass a primary seat belt law, you get lots of extra money.
 - Money available for states with seat belt laws.
 - 10% must be in seat belt laws.
 - Switch infrastructure safety money to behavioral issues.
 - Must have strategic plan.
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**Seat Belt
Encouragement
/ Incentive**

- **Encourages Primary Safety Belt Law**
 - 10% of State's HSIP funds must be obligated for Sec. 402 projects, starting in FY 2005, unless the State enacts a primary seat belt law or demonstrates 90% or above seat belt usage.
 - States must also have in place or adopt a Strategic Highway Safety Plan. Sec. 402 activities funded under this section must be consistent with the State's plan.
 - Money available to fund framework.
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**Traffic Safety
Information
Data Grants**

- **States Lack Resources to Maintain and/or Upgrade Traffic Safety Information Systems**
 - **Grant Funds would allow States to Implement New Technologies to Produce Functioning and Optimal Data Systems**
 - **Eligible States would Receive**
 - 1st Year: > \$300,000
 - 2nd Year: > \$500,000
 - AASHTO plan can serve as model.
 - Florida and Wisconsin used the AASHTO plan to develop their plans.
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**Strategic
Approach to
Highway Safety**

- **Safety Conscious Planning**
- **State-Based Strategic Safety Plans**
 - Comprehensive; "4E" Approach
 - Consider Needs of All Roadways
- **Data Driven Decision Making**
- **Consideration of Special Needs; such as Older Road Users**
 - AASHTO Strategic Highway Safety Plan Can Serve as Model
- STRATEGIC APPROACH: Brings it all together and includes working closely with our partners.
- SAFETY CONSCIOUS PLANNING: Making safety an explicit priority within the transportation planning process.
- Giving equal weight with congestion relief and environmental protection in the decision-making process at the project, corridor and system levels.
- STATE BASED STRATEGIC SAFETY PLAN: Working with states to develop strategic highway safety plans that include engineering, enforcement and education.
- DATA DRIVEN DECISION MAKING: Working with states and

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partners at NHTSA to gather data that can help identify problems and measure success.

- **SPEED MANAGEMENT:** One third of fatalities are related to speeding. Coordinating with NHTSA and FMCSA on the USDOT Speed Management Team.
- **CONSIDERATION OF OLDER ROAD USERS:** Keeping in mind the needs of older drivers in highway design will improve the system for all road users.

STRATEGIC HIGHWAY SAFETY PLAN

Purpose

- **To positively impact the nation's present and predicted statistics on vehicular related death and injury.**
- **To be comprehensive in nature and reflects input from many organizations and individuals.**
- A number of agencies were pulled together.

The Players

- | | | |
|-----------------|--------------|---------------|
| • AAA | AAMVA | AARP |
| • AASHTO | ABF | ARTBA |
| • ATA | APWA | ATSSA |
| • GHSA | GMC | IIHS |
| • ITE | MADD | MSF |
| • NACE | NSC | NTSB |
| • RSF | TRB | US DOT |

More Players

- **states and counties**
- **Bicycle Federation of America**
- **academia**
- **railroad industry**
- **insurance industry**
- **private consultants**
- **enforcement**

Main Elements

- **Drivers**
- **Vulnerable Users**
- **Vehicles**
- **Highways**
- **Emergency Medical Services**

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- **Management**
- These are the six main areas.

Structure

- **6 Elements**
 - **Drivers, Vulnerable Users, Vehicles, Highways, Emergency Medical Services & Management**
- **22 Emphasis Areas**
- **92 Supporting Strategies**
- This was a ton of stuff to look at – money was needed.

Funding

- | FY | DOLLAR AMOUNT |
|--------------------|----------------------|
| 1999 | 450K |
| 2000 | 750K |
| 2001 | 750K |
| 2002 | 750K |
| HWA | 300K |
| Pooled Fund | 1,500K |
| TOTAL | 4,550K |
- Commitment behind the money.

Activities

- **(01) Established Baseline**
- **(02) Website**
- **(03) Guidelines**
- **(04) Highway Safety Manual**
- **(05) Management Process**

More Activities

- **(06) Case Studies**
- **(07) Technology Transfer Plan**
- **(08) Human Factors Guideline**
- **(09) Coordinated Safety Research Approach**

Web Site

- <http://safety.transportation.org/>
- **To share information with individuals who develop highway safety policy and programs.**
- **To promote the implementation of the goals and strategies of the AASHTO SHSP.**
 - **Share ideas**
 - **Share examples**
 - **Share contact names**

**Integrated
Management
Process
To Reduce
Fatalities and
Injuries**

- *To develop a management process that will address major crash problems by effectively integrating engineering, education, EMS, and enforcement.*
 - *To assist in determining the most effective combination of strategies to deploy at the state and local level.*
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Guide Books

- **Provide tools to assist in the implementation of highway safety improvement programs/projects**
 - **Low-cost, readily implementable strategies**
 - **Proven effective**
 - **Experimental/innovative**
 - **Comprehensive**
 - **State, county, & municipal agencies**
 - Guidebooks available.
 - Tools for life.
 - These are tools to use the rest of your life and to save lives.
 - First 6 guide books are the website – can also get hard copies.
 - Guide books give short, long, and intermediate terms.
 - Website is interactive – continually adding new things.
 - Tomorrow work with states to get more information.
 - Governors are only in business for 4 years.
 - Want a quick payoff – show that this is going to work.
 - What can we do in the short term to make it happen.
 - Resulted in millions of dollars being spent on safety.
 - Look at longer term issues.
 - Need some short term successes to move forward.
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Phase 1

<http://safety.transportation.org>

- **Aggressive driving**
 - **Head-on and run-off-the-road crashes on two-lane roads**
 - **Drivers with suspended/revoked licenses**
 - **Trees in hazardous locations**
 - **Unsignalized intersections**
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**Phase 2
August 2003**

- **Truck Related Crashes**
 - **Pedestrian Injuries and Fatalities**
 - **Utility Pole Crashes**
 - **Curve Related Crashes**
 - **Older Drivers**
 - **Unbelted Drivers and Occupants**
 - **Signalized Intersection**
-

**Phase 3
Solicitation
August 2004**

- **Alcohol-related crashes**
 - **Distracted/fatigued drivers**
 - **Young drivers**
 - **Head-on crashes on freeways**
 - **Work zone crashes**
 - **Bicyclist crashes**
 - **Motorcyclist crashes**
 - **Rural EMS**
-

**Estimated Lives
Saved in 2001
Using 1966
Fatality Rate &
2001 Traffic
Volumes**

- **Graph of Estimated Lives Saved in 2001 - *Avoided 110,000 Additional Deaths (70% Less)**
 - For example, due to past fatality rate reductions as a result of improved technologies and programs, we estimate that given the traffic volume in 2000 and the 1966 Fatality Rate, there would have been 109, 000 MORE highway fatalities in the year 2000.
 - Up to 40,000 people lost, if we had not started in 1966.
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**THANK YOU
FOR YOUR
COMMITMENT
TO MAKE
MICHIGAN'S
ROADS EVEN
SAFER!**

- **If it ain't broke, don't fix it**
 - **If it ain't broke, continually improve it.**
 - Michigan is continually improving safety.
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Q&A

- Q With change in the alcohol limit level – is this something the Federal Highway Association believes will cut accidents and save lives?
- A 40% of the people who died are alcohol related accidents, this will help solve the problem but not get rid of it. It will help a little bit and help enforcement people get them off the road. Other state law enforcement officials are making arrests at 1.6 which is double our average, however, it's a start.

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- Q There is resistance in the railroad industry regarding the Federal government funding to spend as the state wishes; the railroad industry thinks it should be tougher.
- A There is a movement in the railroad safety area to get specific funds for railroad gate crossing protection. Around 1200 people killed every year at railroad crossings, this is now down to 360. There is a good chance that there may be specific funding for railroad crossing improvements.
- Q With 1.5 percent fatalities; how does this compare with other countries keeping the same data?
- A Around the world it's running around .9 percent. We are way down on the list as far as the fatality rate. We are down on fatalities numbers – Poland is just below us; we are not doing very well at all, however, we are moving a lot of people.
- Q As states are looking at alternative design standards is the perspective of tradeoffs on a collision course (safety and design standards)?
- A Can be but doesn't have to be. Can design a roadway that is compatible; all depends on the planner. If you have the people with the right backgrounds work together you can come up with a solution. For example in Leelanau County they received an award for effective removal of trees from the roadways in the 1970s. Safety and design standards can be very compatible if we want them to be.

Rudy wrote the safety provision of ITEA and SAFETEA and developed the implementation plans.

Michigan Transportation Crash Profile

Expert Speaker: **Lidia Kostyniuk, Research Scientist**
University of Michigan Transportation Research Institute

Michigan's Transportation Crash Profile

- Lidia is also a professional engineer.
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Outline

- **Crashes and Crash Rates**
 - All Crashes
 - Fatal and Serious Injury (KA) Crashes
 - Had-Been-Drinking (HBD) Crashes
 - **Pedestrians, Bicycles, Motorcycles**
 - **Large Truck Crashes**
 - **Rail-Road Crossing Crashes**
 - **Safety Belt Use**
-

All Crashes, 1997-2002

- **Graph Data**
 - 1997 – 425,793
 - 1998 – 403,766
 - 1999 – 415,675
 - 2000 – 424,825
 - 2001 – 400,813
 - 2002 – 395,515
 - **7.2% decrease from 1997**
-

All Vehicle Crashes: Counts and Crashes/million VMT

- **Graph from 1997 to 2002**
 - VMT = vehicle miles traveled.
 - Count and rate are coming down at a super slow rate.
-

Crash Rates Per 1,000 Reg. Vehicles & Per 1,000 Lic. Drivers

- **Graph from 1997 to 2002**
 - Another way of looking at the overall crash rates.
 - Again slope is going down faster than the count.
 - Both decreasing faster than the count.
-

KA Crashes,

- **Graph Data**

- 1997-2002**
- 1997 – 12,843
 - 1998 – 12,201
 - 1999 – 11,206
 - 2000 – 10,438
 - 2001 – 9,388
 - 2002 – 9,421
 - 26.6 % decrease from 1997
 - 1997 – 3.0 % of all crashes
 - 2002 – 2.4% of all crashes
 - Shows decrease over the last six years.
 - Reasonable decrease.
 - Decrease in the proportion.
-

- KA Crashes:
Counts &
Crashes/100
Million VMT**
- **Graph from 1997 to 2002**
 - Denominator is different; it's a 100 million VMT
 - We'll see what's happening in the trend in the next couple of years
-

- KA Crash
Rates
Per 1,000 Reg.
Vehicles & Per
1,000 Lic.
Drivers**
- **Graph from 1997 to 2002**
 - Nice steady decrease.
-

- KA Crashes by
Month & Year**
- **Graph from 1997 to 2001 by months.**
 - 2002 is similar to 2001 pattern.
 - Peak occurs at the same time which is the time of peak travel in the state.
-

- KA Crashes by
Highway Class
and Year**
- **Graph on different types of roads.**
 - Pattern has been the same.
 - Largest number of city and county roads.
 - 2000 data was really bad and was not being shown.
-

- KA Crashes by
Speed Limit
and Year**
- **Graph at different speed limits.**
 - Pattern was the same.
 - Majority occurs on roads with speed limits of 55 mph.
 - Coincides with the types of roads.
-

**Had-Been-
Drinking
Crashes,
1997-2002**

- **Graph Data**
 - 1997 – 22,082
 - 1998 – 19,537
 - 1999 – 18,523
 - 2000 – 17,300
 - 2001 – 15,805
 - 2002 – 15,824
 - **28.3% decrease from 1997**
 - **1997 - 5.2% of all crashes**
 - **2002 - 4.0% of all crashes**
 - Reduction in proportion.
 - Reduction is quite significant.
-

**Had-Been-
Drinking KA
Crashes,
1997-2002**

- **Graph Data**
 - 1997 – 2,569
 - 1998 – 2,451
 - 1999 – 2,278
 - 2000 – 1,976
 - 2001 – 1,825
 - 2002 – 1,876
 - **27 % decrease from 1997**
 - **1997 - 20 % of all KA crashes**
 - **2002 - 20% of all KA crashes**
-

**KA HBD
Crashes:
Counts and
VMT Rate**

- **Graph from 1997 to 2002**
 - Per 100 million VMT.
 - Rate is not decreasing faster than the count.
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**KA HBD Crash
Rates
Per 1,000 Reg
Vehicles & Per
1,000 Lic.
Drivers**

- **Graph from 1997 to 2002**
-

**Off-Road KA
Crashes
21% of all KA
Crashes in 2002**

- **Graph of KA Crashes and HBD KA Crashes**
 - Single vehicle crashes.
 - 21% of all KA crashes.
 - Decrease from 1997.
 - Off road crashes – high proportion occurred with the HBD and involved young men drivers.
 -
-

**Intersection
Crashes
33.5% of all KA
Crashes - 2002**

- **Graph of KA Crashes and HBD KA Crashes**
 - Pattern is the same as in 1997 and 2002.
 - HBD not as high as in off road crashes.
 - Who is involved in these – older drivers – a larger portion of their crashes are at intersections.
-

**Head-on and
across-median
KA crashes
14% of all KA
Crashes in 2002**

- **Graph of Total Crashes and HBD Crashes**
 - Reduction over time HBD not as significant as the off road crashes.
-

**Hazardous
Actions of
Drivers in KA
Crashes**

- **Graph of Speed to Fast, Fail to Yield, Improper Passing, Improper Lane Use, and Clear Distance**
 - Close to half of the drivers involved are not coded with hazardous actions.
 - There are about 15 codes – not very many.
 - Speeding is the most frequent action.
 - Clear distance – involves following too closely.
-

**Bicycle KA
Crashes**

- **Graph of KA Crashes, HBD KA Crashes, and Hit and Run (KA)**
 - **27% decrease from 1997**
 - Not a huge number of crashes in Michigan.
 - Been a reduction over the last 6 years.
 - Small number involved drinking and hit and run drivers.
-

**Pedestrian KA
Crashes**

- **Graph of KA Crashes, HBD KA Crashes, and Hit and Run (KA)**
 - **22% decrease from 1997**
 - A few more pedestrian crashes.
 - Proportion that are drinking drivers and hit and run drivers.
-

- Motorcycle Crashes**
- **Graph of KA Crashes and HBD KA Crashes**
 - **7% increase in Motorcycle KA Crashes since 1997**
 - **45% increase in number of registered motorcycles**
 - **7.5% increase in motorcycle endorsements on driver license**
 - **~45% of crash-involved motorcyclists do not have endorsement**
 - Motorcycle crashes went up in Michigan and nationally.
 - Michigan is below the national increase.
 - Larger increase in number of all motorcycle crashes.
 - Increase in registered motorcycles.
 - Increase in the number of people who have motorcycle endorsements on their driver's license.
 - Licensed status involved motorcycles who do not have endorsements.
 - 1/3 involved had no driver's license at all.
 - Aging of the motorcyclists.
 - More of younger motorcyclists are unlicensed.
 - Nationally many studies have been done – as soon as you take off the helmet law numbers of fatalities go up.
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- KA Large Truck Crashes**
- **Graph of KA Crashes and HBD KA Crashes**
 - **9% decrease from 1997**
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- Railroad Grade Crossing Crashes**
- **Graph of KA Crashes and HBD KA Crashes**
 - **45% decrease from 1997**
 - Oscillates really hasn't increased.
-

- Safety Belt Use, June 2003
Observational Study**
- **Overall – 83.9%**
 - **Drivers – 84.7%**
 - **Passengers – 80.8%**
 - **Passenger Cars – 86.6 %**
 - **SUV – 85.8%**
 - **Van/Minivan – 84.8%**
 - **Pick-up Truck – 73.3%**
 - Michigan has a primary seat belt law.
 - Michigan is doing pretty well.
 - Study recently completed – but wouldn't release the numbers.
-

- Proportion of Belted KA
Crash-Involved Drivers by Age
and Year**
- **Graph from 1997 to 2002**
 - Top lines are the 70 year olds.
 - Red line is under 18.
 - Inverse to the age.

(Continued on next page.)

- Black line is 18-24 yr olds.

**Proportion of
Belted KA
Crash-Involved
Passengers by
Age and Year**

- **Graph from 1997 to 2002**
 - Passenger rates are lower than driver rates.
 - There is a pattern here.
 - Blue line is oldest age group.
 - Gray line is second oldest 55-60.
 - Red line is children under 4
-

**KA Crashes/
1000 Licensed
Drivers by Age
and Year**

- **Graph from 1997 to 2002**
 - Youngest is on top.
 - And oldest is on bottom.
 - Those not wearing safety belts are involved in more crashes.
-

Q&A

- Q More and more jurisdictions seem to be passing laws around cell phone use; was this part of the study?
- A Cell phone use is involved in a study. Looked at safety belt use and cell phone use and it turns out those who are on cell phones were less likely to be wearing seat belts. Cell phone users seemed to be people with riskier behaviors.
- Q Are there more crashes at signalized or un-signalized intersections? With more people moving out into rural areas there seems to be more accidents occurring in these areas; where are the accidents occurring on the country roads?
- A At all intersections, whether signalized or un-signalized. Land use issue in the rural area; yes studies have been done looking at land use and crash rates. Analyze land use and crash rates; there was an interesting study that looked at land use and crash rates. You're probably right about more accidents occurring in rural areas due to increased traffic in places that weren't designed for high traffic levels.
- Q Impressive numbers in Michigan, were you able to identify factors that contributed to the reduction?
- A Don't know what the factors are; there was no primary seat belt law in 1997. The seat belt law started in 2003.
- Q Regarding pedestrian crashes is there a relationship or over-representation of pedestrians that had been drinking and were involved in crashes.

(Continued on next page.)

A Don't know the exact proportion but yes it is a problem. Was surprised of the number of bicyclists that had been drinking (years ago). Nationally the alcohol level of pedestrians is about 60 percent; which is an issue in itself.

Q Half a dozen different field data was used; what fields did you use?

A It was a combination of several fields; Charlie Compton helped in deciding which ones to use.

Michigan Crash Data Solutions

Expert Speaker: **Jack Benac, Project Manager, MDOT**

- **“Statistics regarding street and highway accidents are so vital to any comprehensive understanding and treatment of the safety problem that their collection and analysis in every State and community are essential.”**

**National Safety Conference – 1924
Washington, D.C.**

Traffic Safety – Everyone’s Responsibility

- **Loss of Life – 1,279 Michigan, 2002**
 - **42,000 Nationwide**
 - **Economic Impact - \$9.4 Billion loss to Michigan**
 - **\$230 Billion Nationwide**
 - **Every tragic event involves a member of a family!**
 - Rudy Umbs is one of the many mentors for traffic safety.
 - Loss of life – real people who are family members, people we work with, etc.
 - 2 ½ years to kill as many people in crashes in Michigan as in 9/11.
 - Opportunity to speak to law enforcement – work on quality.
 - Secondary road patrol – middle of the road law enforcement agencies say the hardest part of their job is at 2-3 in the morning telling the parents that their child was involved in a fatal accident.
-

National Trend

- **42,850 persons killed in 2002, Up 1.7% over 2001**
 - **Upward Trend in Alcohol Related Deaths**
 - **Motorcycle Fatalities rose for the Fifth Year – Highest since 1990**
 - **59% of Those Killed were not Wearing**
 - Our job is to do everything we can to improve safety.
 - Crash information is an important part of that.
 - Without timely and accurate information we cannot improve safety.
 - Law enforcement cannot deploy their resources effectively.
 - Transportation engineers cannot react properly to problems on their roads.
 - Driver education and safety programs cannot respond to problem drivers.
 - 2001 compared to 2002
-

Michigan's Success

- **1.3% Decrease in Total Crashes 2001-2002**
 - **3.7% Decrease in Fatalities 2001-2002**
 - **8.7% Decrease in Alcohol/Drug Related Fatalities**
 - **12.7% Decrease in Motorcycle Fatalities**
 - Upward trend from a national perspective.
 - If we look at the distribution – motorcyclists are becoming an older group – more responsible than younger motorcyclists.
-

Crash Data Solution!

- **Transportation Network Speaks to us Through Crash Data**
 - **Michigan's Investment in Crash Data**
 - **Partnering with Statewide Stakeholders**
 - **Ability to Use New Technologies**
 - Is critical from a decision making process.
 - HSIP process rolled out in 1966 – still a good model.
 - The more data we have; the more we understand the system.
 - We need all the data we can get.
 - Not only from a crash perspective but from intersection and roadway features.
 - Seat belt law has brought in a lot of money to the state.
 - Brought a lot of people into the process through partnering – talk about what we need and are supporting our process.
 - Technology – more flexible on how we deliver data to the community than in the past.
-

Crash Data Solution! New Improvements

- **Law Enforcement WEB Access**
- **Consistent Map Based Location Referencing**
- **Quality, Timeliness, Document Management**
- **Seamless/Accessible Datamart/Warehouse**
- **Integrated Solutions – MDOS, FARS, SAFETYNET, MDOT**
- **Elimination of Redundant Databases**
- The Crash processing system has not been thoroughly reviewed or upgraded since the 1970s.
- This project is committed to put in place an improved system that will enable efficient use of the system without system or technical constraints.
- Because of these problems, data is not available; resources are required to just get the data in the system rather than concentrating on quality and timeliness.
- We are very optimistic that we will finally be able to institute significant improvements and see real results.
- Rolling out in the next two months.
- Web access for law enforcement is new in Michigan.
- Law enforcement can look at reports on-line.

(Continued on next page.)

- Provide information from 1993 to 2002 to put into the GIS system.
 - Hook up to Secretary of State and fire systems using some of MDOT's data.
 - Replacing three databases with one database.
-

Where We Need To Go!

- **Adopt FHWA Focus Areas – Run Off Road, Speed Related, Intersection, Ped/Bicyclist**
 - **Collect and Maintain Seamless Statewide Data – Asset Management**
 - **Statewide HSIP**
 - **Professional Development of Traffic Safety Resources**
 - **Balanced Funding**
 - Because of problems with the system people from all three agencies combined their efforts to put a plan in place to improve the system back in August of 2001.
 - About 30 people from state and local agencies came together to help with that effort.
 - It was realized that in order to accomplish some of their goals a project manager was hired to develop recommendation for moving forward.
 - That effort has resulted in where we are today.
 - Complacency – reduce fatal rate – what are the answers we need to be pursuing?
 - Gospel according to Jack – hope that Michigan will develop an interest in this.
 - Effort going on in Michigan in collecting access management data which will help us in the safety area.
 - There needs to be a lot more data available to have good decisions about safety.
 - HSIP – good models out there – expand statewide (SEMCOG and TIA have good models).
 - Drive down fatal rate across the state.
 - We are in need of people who understand traffic engineering – get the training in graduate programs, seminars, or on the job.
 - Make sure we are spending money fairly across the board and are addressing the problem where it occurs.
-

**Where We Need To Go!
Integrate the Four E's**

- **Automotive and Transportation Engineering – NHTSA's use of Electronic Recording Devices (ERD)**
- **Model Minimum Uniform Crash Criteria (MMUCC) Compliance in Crash Reporting**
- **Integrate Emergency Medical Services (EMS) Information in Crash Reporting**
- Prior slide is basics and fundamentals of safety.
- A lot of places we can go if we challenge ourselves.

(Continued on next page.)

- In the past looked in our own silos – we can benefit from the automotive industry.
 - Huge privacy issue on use of electronic recording devices (ERD's) – so much information and a lot more accurate – potential amount of data to impact safety.
 - Emergency Medical Services – Michigan has not done a lot here at all.
-

**Where We Need to Go!
Integrate the Four E's**

- **Driver Assessment (Education) – Correlation of Driver Records with the at Fault Driver**
 - **Better Understanding of the Dynamics of Human Behavior**
 - **Interaction of the Vehicle Fleet (Traffic Flow, Congestion, Crash Severity)**
 - **Leverage Technology (ITS, GPS, OnStar)**
 - Correlate driver with traffic crashes.
 - Shiawassee County had an accident over the weekend involving two 14 year olds.
-

- **Traffic safety is a health issue.**
 - **Saving lives is the ultimate measure of success.**
-

Q&A

- Q The real problem is on local roads as opposed to highways; are resources adequately being focused in that area?
- A No, not enough resources. Topic program in Michigan; trained people in traffic engineering. Make recommendations and local agencies could follow up on the initiatives. Need to look at the whole system instead of a portion of it.
-

Statewide Safety/Working Together

Expert Speaker: **Larry Tibbits, Chief Operations Officer, MDOT**
Brian Zimmerman, Work Zone Technical Administrator, MDOT

STATE OF MICHIGAN – Statewide Safety

- Statewide safety depends on all of us.
 - Truly a group effort and everyone has to work together.
-

The Case for Traffic Safety ...

- **Michigan has ...**
 - **122,000 miles of highway**
 - **98.2 Billion vehicle miles traveled in 2002**
 - **400,000+ crashes yearly**
 - **112,000+ crash injuries yearly**
 - **1200 – 1400 fatalities yearly**
 - Will see a lot of the same statistics during these presentations.
 - Simple messages, repeat them often, this is how you obtain the goal you need to reach.
-

Unacceptable Cost in terms of ...

- **Loss of Life – 1,328 Michigan, 2001**
 - **(42,000 Nationwide)**
 - **Economic Impact - \$9.4 Billion loss to Michigan**
 - **(\$230 Billion Nationwide)**
 - **Every tragic event involves someone's family member!**
 - Nationwide every month since 9/11 we have lost the same amount of people.
-

AASHTO Safety Goal

- **1.5 Fatalities per 100 Million VMT, 2002** - (Michigan Fatalities – 1.34 per Million VMT)
 - **Reduce to 1.0 Fatalities per 100 Million VMT by 2008** - (Save 350 lives per year in Michigan)
 - AASHTO has set the goal.
 - Nationally reach the goal by 2008 – save some 9,000 lives a year.
-

Aggressive Goal?

- **Graph from 1996-2008**
 - **1.0 by 2008 United States Fatality Rate per**
 - **100 Million Vehicle Miles Traveled**
 - Is the goal to aggressive – no.
 - Continue that decline by being aggressive.
-

- Michigan Road Mileage:**
- **Pie Chart of MDOT City, County, Non-freeway, and Freeway**
 - **City & County – 92%**
 - **MDOT Non-freeway – 6.4%**
 - **MDOT Freeway – 1.6%**
 - **122,000 miles**
 - MDOT has about 8% of the roadway network in Michigan.
-

- Michigan Traffic Volume:**
- **Pie Chart of MDOT City, County, Non-freeway, and Freeway**
 - **City & County – 46%**
 - **MDOT Non-freeway – 23%**
 - **MDOT Freeway – 31%**
 - **2002 Michigan data**
 - **98.2 Billion vehicle miles**
-

- Michigan Traffic Crashes:**
- **Pie Chart of MDOT City, County, Non-freeway, and Freeway**
 - **City & County – 68%**
 - **MDOT Non-freeway**
 - **MDOT Freeway**
 - **1999 Michigan data**
 - **416,000 crashes / year**
-

- Michigan Traffic Deaths:**
- **Pie Chart of MDOT, City, County**
 - **City & County – 61%**
 - **MDOT – 39%**
 - **1999 Michigan data**
 - **1386 deaths**
 - By MDOT's standards this is too high.
 - Team – comprehensive approach – work with city, county.
-

- Comprehensive Safety Approach!**
- **“Buckle Up or Pay Up”**
 - **“You Drink & Drive - You Lose”**
 - This is the main focus.
 - You truly have to leave your organizations at the door to truly address this issue.
 - Safety is a national health issue.
-

**Statewide Safety/
Working
Together**

- **Brian Zimmerman, Work Zone Technical Administrator**
-

**Goals &
Objectives**

- **Follow the Part 6 of the MMUTCD**
 - **Provide for the safety of workers and road users.**
 - **Inhibit traffic as little as possible**
 - **Guide drivers and pedestrians in a clear and positive manner.**
 - **Training**
 - **Public Relations**
 - These items are all a part of the Fundamental Principles described in the MMUTCD, Part 6, under section 6B, which have been shown to enhance safety of motorists and workers in temporary traffic control areas.
 - Work zone are goals and objectives are to follow the Michigan manual which is an adoption of the national manual.
-

**Provide for
Safety of Users**

- **Goal: Reduce traffic related deaths/injuries in work zones.**
 - If we do all of these things than we can reduce traffic.
 - For example, there was a motorist injured while putting in rumble strips.
-

**Crash
Comparisons**

- **Graph of 1996-2002 Michigan Work Zone Crash Comparison**
 - **1996: Crashes – 5326, Injuries – N/A, Fatalities – 14**
 - **1997: Crashes – 6,638, Injuries – 2,510, Fatalities – 15**
 - **1998: Crashes – 7,049, Injuries – 2,379, Fatalities – 21**
 - **1999: Crashes – 7,291, Injuries – 2,226, Fatalities – 26**
 - **2000: Crashes – 6,562, Injuries – 2,018, Fatalities – 9**
 - **2001: Crashes – 6,475, Injuries – 1,893, Fatalities – 16**
 - **2002: Crashes – 6,260, Injuries – 1,726, Fatalities – 17**
-

**Provide for
Safety of
Workers**

- **Pictures of worker in work zone area and a picture of a crash in a work zone area.**
 - In 2002, 1 worker was injured by traffic, 1 worker was killed by traffic, but 5 were construction related while working inside the drum line.
 - We have taken safety seriously.
-

| | |
|----------------------------|--|
| Promote Safety | <ul style="list-style-type: none"> • Create uniform work zones <ul style="list-style-type: none"> - Using different devices and layouts can cause confusion or distract the road user. • It is important that road users see the same traffic control for similar situations. This is also important for industry when planning on costs for bidding projects. • These slides came from Michigan roadways. Sign read “Men Supposedly Working”. • Use the same traffic control in all situations. |
| Department Training | <ul style="list-style-type: none"> • Provide two day course to construction/maintenance/design staff every three years. • Provide 1/2 day training update to construction/maintenance/design staff annually. • The two-day training course is designed to introduce basic fundamentals of traffic control design and application. The program is based on the MMUTCD, Part 6, and includes a full day of design and layout so the staff can determine proper traffic control methods, and which methods serve both the motorist and worker in the most efficient manner. • The 1/2 day training is designed to keep field staff up to date on the latest changes in the work zone program, and provide the points of the traffic control plan that need to be improved for the upcoming season. • Last year this training course was started • Provide training at all of the TSC’s. |
| Industry Training | <ul style="list-style-type: none"> • Provide training to industry at the same level as department staff to create improved expectation and uniformity. • By partnering with industry, cultural change can occur which will create ownership by not only the department, but all contractors and subcontractors which in turn provide the road user with consistent work zones. • Focus on our department and those who work with us must also work with us. • Set down with industry on some pilot projects and work with training on a higher level. |
| Guide Road Users | <ul style="list-style-type: none"> • Picture of guide road. • To insure that road users are being properly guided: <ul style="list-style-type: none"> - Perform more inspections on more projects. - Provide day and night inspections. - Use of Uniform Report Format for work zone reviews. • To insure that proper traffic control is in place, inspections need to be |

(Continued on next page.)

performed more frequently and earlier in the project. Both day and night inspections may be critical to work zones that may not be functioning properly. Uniform report formats for inspections were introduced in 2003 to not only create uniformity in the inspection, but to also provide information back to the department on which areas of the traffic control plan require improvement.

- Time and materials need to change; however, sometimes the risk of not changing it is worth it.

**Provide
Enhanced Law
Enforcement**

- **2002 - \$335,000 program**
- **2003 - \$436,000 program**
- **2004 - \$517,000***
- ****Estimated program, which includes increased spending on public relations issues.***
- While not all of the funding allocated may have been spent, many of the regions reported that they were able to get enforcement on projects that were never billed. Establishment of a base number of hours may be a better way to determine if work zone enforcement increased or decreased.
- Law enforcement presence has been very good and we work to make it better.

**Innovative
Devices**

- **Continue to use and develop devices designed to improve traffic flow through work zones.**
- This is a photo of a moveable barrier wall. This wall was deployed on I-75 north of Flint to provide traffic volume changes during weekend traffic flow peaks. Three lanes were provided to motorists northbound for the beginning of the weekend, and then switched to provide the southbound motorists with three lanes at the end of the weekend. Other examples of innovative devices have been used to change motorists' habits. One is where installation of temporary rumble strips gets the attention of the driver, or another where installation of dynamic lane merge signing which is designed to merge a motorist before the lane closure occurs.
- We reduced the number one crashes which is rear end crashes using this device.

Public Relations

- **Current Practices in Place:**
 - Daily press releases on road work activities.
 - Give 'Em a Brake Campaign
 - Billboard Locations
 - Radio Public Service Announcements
 - Television Public Service Announcements

(Continued on next page.)

- Bumper Stickers
 - Public relations can play a major role in work zone safety. Without providing road users with real time information, road users may be uninformed and feel caught. Motorists which are uninformed or confused may not alter driver habits to meet the needs of the road work being performed. Providing road users with press, radio, television, billboards and even bumper stickers are all good tools to help provide the motorist with information and education on proper driver habits in work zones.
 - Lots of things to impact the public.
-

- Public Relations**
- **Additional Items for 2004**
 - **New signs for pilot work zone projects**
 - **Development of a speakers bureau on work zone safety**
 - **Focus group on driving habits in work zones**
 - **Drivers education training tape***
 - **Creation of new public relations campaign***
 - *** *Additional Funding Required***
 - While the tools being used are good, they also need a boost to freshen the appearance and even can be used to target specific audiences. In 2004, some pilot projects will have a sign before the work zone that reminds a road user that they should “Be Careful, My Mommy (or My Daddy) Works Here.” which is written in a kids font. To get to the new drivers who may not be aware of how important proper driving in a work zone is, the development of a drivers’ education tape on work zones may fill a gap in the drivers’ information system.
 - Build some driver education training tapes if we have the funding.
 - Create new public relations campaign.
-

- Conclusions**
- **MDOT and Industry will continue to work together to improve :**
 - **Work Zone Traffic Control**
 - **Worker Safety**
 - **Road user Safety**
 - If we work together we can reduce crashes and save lives.
-

Q&A

- Q Downtown Detroit the 1-75 where project should be completely shut down but is not shut down; this takes longer and is not as safe. How do you decide when to shut or not shut the road completely? Will there potentially be more projects where the entire facility will be shut down during construction/repair?
- A MDOT looks at these projects one by one. There was a phase where we thought we had to expedite projects. Metro has found that if they do their advance work ahead of time, there are critical arterials that they can accomplish. In the future MDOT will continue analysis per project.
- Q Industry and MDOT do a better job of making signs reflect the activity of what is there, however, sometimes the signs are still up when there is not construction activity occurring. Shouldn't these signs come down as soon as a project is finished?
- A MDOT's goal is to make sure our signs never lie. If signs are left behind MDOT crews or local crews are to take signs down when the project is finished.
- Q So far there has been no discussion of lane width, is this something MDOT should focus on? Should be discussed in terms of safety initiatives?
- A Lane widths are dictated by national standards; sometimes a design exemption is requested. However, exemptions are used very sparingly.
- Q Regarding uniform in signage; is there some contradiction from early thought?
- A It was not a statement of too many signs; you will see the same signs throughout the state. Our goal is to get signs fixed. Public will read so much then get overwhelmed by it all. Work Zone Program is trying to change habits; too many signs won't solve problem. Consistency with signs will help change their habits. The ultimate goal is signs down when they need to be, proper speed limit signs posted. We're continuously making improvements.
-

Impacting Driver Issues

Expert Speaker: **Anne Readett, Public Information Specialist, State Police
(Office of Highway Safety Planning)**

Overview of Traffic Safety Programs

- **Office of Highway Safety Planning (OHSP)**
 - I'm kind of a traffic safety nerd, I have doing this for 10 years.
 - I get these types of questions on a regular basis.
-

About OHSP

- **Responsible for administering:**
 - **Federal traffic safety funds from the National Highway Traffic Safety Administration**
 - **Michigan Truck Safety Commission**
 - **Secondary Road Patrol**
-

Traffic Safety Objectives

- **Support programs with the greatest potential to save lives and prevent injuries.**
 - **Use problem identification as the basis for program and funding decisions.**
 - **Source: Michigan Traffic Crash Facts**
 - **Focus on behavior change.**
 - Everyone has an idea for a traffic safety campaign that's going to work.
 - Get helpful input from people all of the time.
-

Priority Areas

- **Increase safety belt use**
 - **Nearly 40 percent of those people who die in Michigan traffic crashes are not buckled up.**
 - **Reduce drunk driving**
 - **Nearly 36 percent of all fatalities involve alcohol and/or drugs.**
 - Two main priority areas.
 - Reasons are clear and simple.
 - There are some types of fatalities that are not survivable.
-

Changing Behavior

- **Numerous studies conclude the most effective way to change behavior is through traffic enforcement campaigns.**
 - Warm fuzzy campaign; all drivers think they are really good drivers.
 - Talking about enforcement; recognize perhaps that we violate these laws from time.
 - Some people take notice and a lot of them change their behaviors.
-

Priority Programs

- **Buckle Up or Pay Up - Click It or Ticket**
 - **You Drink & Drive. You Lose.**
 - Nothing warm or fuzzy about our campaigns
 - Young men, what would change their behavior?
 - They do not want to pay a fine.
 -
-

National Enforcement Campaigns

- **Nationally, the states have begun to work on coordinated enforcement efforts at specific times of the year.**
 - **Coordinated by NHTSA and others**
 - **Seeing success at increasing safety belt use**
 - Big movement nationally.
 - Working in a concerted effort.
 - Four times a year, roll out our publicity machines. Which are holiday weekends such as Thanksgiving, Christmas, etc.
-

State-Level Enforcement

- **OHSP grant funds allow high-crash counties to use federal traffic safety funds for overtime enforcement of safety belt and drunk driving laws (*Drive Michigan Safely Task Force*).**
 - **All law enforcement agencies are invited to participate in mobilizations.**
 - **Can qualify for random drawings for equipment or overtime funds.**
 - We recognize everyone has a problem in their area; we look at where we have the biggest impact.
 - Identify the counties with the biggest population and most accidents that's where law enforcement will get the overtime dollars.
 - 20 counties with 2 million dollars.
 - Highest number ever participating in this last fiscal year; used what ever resources that they had.
 - People use safety belts all the time or more than they used to.
-

Key Audiences

- **Safety belt efforts: young men, minority populations**
- **Alcohol and drunk driving: young men**
 - **Using paid advertising for these hard-to-reach populations.**
- Came through loud and clear on the data.
- Same group for both of the priority areas.
- Be broader and deeper in our efforts.
- Get a lot of news coverage; not these two groups, need to buy advertisement to reach these groups.
- Let's make an effort to reduce injuries with this money to reach the groups identified through the data.

Working with Partners

- **Mobilizations efforts are assisted by:**
 - **MDOT changeable message signs.**
 - **Information at Department of State branch offices.**
 - **Banners hung by law enforcement agencies.**
 - **Information available through local public health departments.**
 - **Articles in public and private newsletters**
 - We try to be somewhat involved.
 - Always trying to build relationships.
 - Get a cohesive understanding.
 - MDOT has been a wonderful partner; put things up in the rest areas, etc.
 - “Someone needs you” one of the most powerful campaigns in Michigan.
 - Secretary of State branch offices have put up posters.
 - Big banners for law enforcement agencies.
 - MDOT has a lot of stuff in their employee newsletter.
-

The Planning Process

- **OHSP uses traffic crash data, research and best practice models to determine programming.**
 - **Grant funds are channeled where the crash problem is greatest, generally high-population centers.**
 - **OHSP accepts proposals for grant funding; however, these must address priority areas.**
 - What’s happening nationally; what are other states doing that we are not.
 - Sharing things that are tested and evaluated.
 - Accepts grant in early winter. Grants have to address a priority area. People looking for grant money and have local issues, but it needs to be statewide. Fits with our goals and objectives to move forward with what we are trying to achieve
-

The Grant Process

- **The annual Highway Safety Plan takes shape annually in the spring.**
 - **It determines funding and programming for the upcoming fiscal year.**
 - We are a pass through organization.
 - Working with communities.
 - Detail how we are going to spend every federal dollar.
-

Other Program Areas

- **Bicycles**
- **Child Passenger Safety**
- **Corporate Outreach**
- **Elderly Mobility**
- **Judicial Outreach**

(Continued on next page.)

- **Motorcycles**
- **Pedestrians**
- **Roadway Safety**
- **Safe Communities**
- **Traffic Records**
- **Young Drivers**
- **Youth Alcohol**
- We're lots of things in lots of these areas.

Q&A

Q Fastest growing causes of crashes that are non-fatal are distracted drivers; data has shown that there is some gender issues. Why weren't these mentioned and should they be?

A In 2000 we collected information on driver distraction and cell phone use; however, these were not big numbers. It's a very hard thing to determine. How do we address from an enforcement aspect; by education. Without education campaigns, enforcement tends to not have much success. It's becoming more of an issue with cell phones; data in Michigan cell phone usage showed that there was not a major issue in Michigan. Gender gap is very large; women wear seat belts more than men. Until we see more success in men using seat belts, we are not focusing women. 45-50% attention paid to these issues; looking into these issues from observation surveys and fatality data.

Q Enforcement plays a big roll in reducing crashes; can this be done by placing cameras at intersections to see how accident occurs?

A We can't lobby for any kind of legislation. Insurance Institute for Highway Safety has to lobby for cameras. Not very widespread; there is a lot of data to look at.

Q What are states doing differently than us?

A Some states have checkpoints; which helps them to have a better reaction to alcohol fatalities. More visible enforcement. Michigan does not have checkpoints (legally we can't). Some states have highway patrols that are strictly highway enforcement. Michigan State Police have other duties besides highway patrol.

Local Issues & Solutions

Expert Speaker: Frank Cardimen, Executive Director/President, ITS Michigan/TIA

A TRAFFIC SAFETY SUCCESS STORY: Traffic Safety Management System Used at the Local Level

- **PRESENTATION TO: TRANSPORTATION SUMMIT COMMITTEE**
-

Oakland County Michigan

- Part of Southeastern Michigan Council of Government (SEMCOG)
-

TRAFFIC IMPROVEMENT ASSOCIATION - Oakland County, Michigan

- Began 1967 -36 years old
 - Non-Profit Corporation 501 (c. 3)
 - Public - Private Partnership
 - Independent
 - Unique Organization to Michigan, U.S.
 - There is no other TIA anywhere.
-

OAKLAND COUNTY STATISTICS - 1967

- **Population** 300,000
 - **Number of Jobs** 250,000
 - **Vehicle Miles Traveled** 3.0 Billion
 - **Traffic Fatalities** 206
 - **Fatality Rate** 6.8
 - Background to give some perspective.
 - 5.6-5.9 at that time (1967).
-

OAKLAND COUNTY STATISTICS - 1967

- **Population** 300,000
 - **Number of Jobs** 250,000
 - **Vehicle Miles Traveled** 3.0 Billion
 - **Traffic Fatalities** 206
 - **Fatality Rate** 6.8
 - Over four times the population, jobs, vehicle miles traveled (VMT).
-

Oakland County Fatalities – 1965-2001

- **Graph shown decreases throughout the years.**
- **Leveling off for 2002.**

Oakland County

- **5200 Miles of Roads**
 - **50 % - Road Commission for Oakland County**
 - **42 % - Cities and Villages**
 - **8 % - MDOT (State Roads)**

What is the TRAFFIC IMPROVEMENT ASSOCIATION?

- **How do we implement a traffic safety management system?**

TIA Mission Statement

- **The mission of the Traffic Improvement Association shall be to facilitate engineering, education and enforcement programs that reduce human and economic losses caused by traffic crashes and congestion.**
- **In 1992 added “and congestion”**

CUSTOMERS

- **65 Communities**
- **Road Commission for Oakland County**
- **48 Law Enforcement Agencies**
- **15 District Courts**
- **Oakland County Schools**
- **Businesses and Citizens**
- **Traffic Safety Organizations - MDOT, AAA, FHWA, NHTSA, ITE, MADD, OHSP, SEMCOG, TRB, UMTRI, Traffic Engineering Consultants, etc.**
- **Oakland County road commission is the largest in Michigan.**
- **TIA is an integrated part of all of these customers.**

FUNDING

- **40 % - Local Communities**
- **30 % - Road Commission for Oakland County (RCOC)**
- **20 % - Private corporations**
- **10 % - Grants**
- **100 % TOTAL**
- **5 Full Time and 4 Part Time Staff and 2 Grant Related Staff**
- **Other state or federal agencies.**

**Traffic
Management
System**

- *“On a day-to-day basis, TIA’s Traffic Management System provides training, coordination, public support, advocacy, public information and education, clearinghouse functions and serves as a vehicle for countywide master planning in traffic.”*

**Bruce Madsen
Executive Director
TIA**

- Bruce was original Executive Director in 1967.
-

ROLE OF TIA

- **INFORMATION BROKER**
 - **The 3 E’s of Traffic Safety**
 - **ENFORCEMENT**
 - **EDUCATION**
 - **ENGINEERING**
 - **CRASH DATA ANALYSIS- County-wide**
 - *1300 Intersections, 2500 Road Links, and Location Study analysis*
 - We are the information broker.
 - Call comes to us to organize, facilitate, etc.
-

ENGINEERING

- We manage and monitor over 1300 intersections in Oakland County.
 - 2400-2500 road sections.
 - Monitor data to help solve problems.
-

**Importance of
Crash Data**

- **TIA uses crash data to identify local problems and tries to find solutions!**
 - **In order to be useful, located crash data must be accurate and timely!**
 - Absolutely critical to have information to use to solve problem.
 - At the local level to find solutions.
-

Uses Crash Data

- **Traffic Engineering Studies - MDOT, locals, RCOC, and consulting engineers**
- **Support funding for road projects**
 - Williams Lake Road, I-75 Corridor, I-96, etc.
- **RCOC - Support Project Prioritization**
- **Litigation (Defense & Prosecution)**
- **Planning Activities**
- **Council & Board Reports**
- **Selective Law Enforcement Projects**

(Continued on next page.)

- **Countywide - Traffic Signal Retiming Project**
 - Everyone signal will be retimed in the next year and a half in Oakland County.
 - Brought together all the people impacted in Oakland County; secured 4.5 million data and 3 committees.
-

- Provides Reports to Stakeholders**
- **Location Studies**
 - **Ranking Reports**
 - **Engineering Crash Diagrams**
 - **Special requests**
-

- Crash Location Study Report**
- Chart of Crash Data Report**
- **For Reetz-12 Mile & Crooks**
 - Everyone of these lines is a crash – key engineering about the crash.
-

- Crash Location Study Report**
- Second Chart of Crash Data Report**
- **For Reetz-12 Mile & Crooks**
 - Provide a very simple summary that's easily read.
-

- Collision Diagram**
- **Diagram Chart of Hamlin & Livernois (01/01/97-12/31/99)**
 - We can automatically provide an engineering diagram.
 - First line of defense in solving the problem.
-

- Ranking Reports**
- **TIA ranks each major intersection and roadlink in the county by:**
 - **Frequency**
 - **Severity**
 - **Volume**
 - **One Example – 12 Mile and Beck Roads**
 - Ranks by each local community for the county.
-

| | | | |
|------------------------------|--|-----------------------|-----------------------|
| 12 Mile and Beck Road | • <u>Before/After Engineering Changes</u> | | |
| | | Persons | Total |
| | <u>Year</u> | <u>Injured</u> | <u>Crashes</u> |
| | 1993 | 34 | 80 |
| | 1994 | 38 | 88 |
| | 1995 | 39 | 84 |
| | 1996 | 5 | 37 |
| | 1997 | 6 | 38 |
| | 1998 | 5 | 39 |

(Continued on next page.)

| | | |
|--------------------|----------|-----------|
| 1999 | 8 | 34 |
| 2000 | 1 | 12 |
| 2001 | 1 | 19 |
| 2002 | 4 | 27 |
| 2003 (July) | 1 | 15 |

- Number of crashes reduced significantly.
 - Used these incremental changes over time to make are roads safer.
-

12 Mile and Beck Intersection

- **Investment \$ 1.2 Million**
 - **First year savings \$ 0.8 Million**
 - ***Project Payback - 1 1/2 years !!***
 - **.... and most importantly 33 personal injuries prevented each year**
 - Anything less than a 10 year payback great – 1½ extraordinary.
-

What TIA can do TODAY with crash data!?

- **Collect crash data directly from police**
 - **Record/Scan and LOCATE within two weeks from time TIA receives crash report**
 - **Today TIA has current crash information for Oakland County.....**
 - **Through August 1, 2003**
 - **Implementing a whole new system because of Y2K.**
 - **Collect the document directly from the law enforcement officer.**
-

TRAFFIC CRASH DATA/ANALYSES VALUE TO THE - ROAD COMMISSION FOR OAKLAND COUNTY

- **Planning**
 - **Road Prioritization Projects**
 - **Local Disputes**
 - **Legal Issues**
 - **Grant Preparation**
 - **CORRECTIVE ACTION FOR INTERSECTIONS**
 - **CORRECTIVE ACTION FOR ROAD LINKS**
 - **Others**
 - **RCOC Planning Process – Federal Highway Association Model**
 - **We provide them with special ranking reports based on their criteria.**
 - **They continually plan and prioritize.**
-

Other Traffic Engineering Support

- **Traffic counts - average daily analyses**
- **Support locals by attending:**
 - **Board Meetings**
 - **Community Groups**
 - **Police Departments**
 - **Traffic Safety Committees, etc.**

(Continued on next page.)

- Schools
 - Businesses
 - Media
 - Special studies - *traffic signal retiming*, etc.
 - Liaison for engineering projects with locals, RCOC, SEMCOG, and MDOT
-

- LAW ENFORCEMENT**
- Second piece is law enforcement.
 - Work very closely with Office of Highway Safety Planning.
-

- LAW ENFORCEMENT PROGRAMS**
- **TIA USES CRASH DATA TO:**
 - Identify problem areas - eg., drunk driving
 - Identify high/severe crash areas
 - Support police patrols to mitigate problems
 - Support “corridor” projects - multi-jurisdictions
 - Support grant preparation-local, state and national
 - Etc.
-

- LAW ENFORCEMENT PROGRAMS 2002-2003**
- **DESIGNED PROGRAMS FOR UNDERAGE DRINKING**
“LOOKOUT” for Michigan (OHSP grant)
 - Party Patrol
 - Videos - young drivers, bar staff, etc.
 - **“DRIVE MICHIGAN SAFELY TASK FORCE” (OHSP Grant)**
 - **CLICK IT OR TICKET**
 - **YOU DRINK YOU DRIVE, YOU LOSE**
 - **TRAINING COURSES**
 - Safe and Legal Traffic Stops Course
 - .08 BAC Law Training
 - Repeat Offender Training
 - UD-10 review
 - Involved with a special design program for underage drinking.
 - Involved at the local level with law enforcement on a daily basis.
-

- Alcohol Enforcement Team Recognition Luncheon**
- **10,000 DRUNK DRIVING ARRESTS - 1980 - 2001**
 - **The Palace of Auburn Hills, May 8, 2001**
 - Oldest NHTSA grant alive today.
 - Funded by local county sheriff department.
 - One of the most successful programs in the country.
-

**Additional
DRUNK
DRIVING
Programs**

- Hosted ALCOHOL SUMMIT
 - VIDEOS - Driver Education, Bars
 - Advocacy - .08 BAC
 - MADD Campaigns
 - Training
-

**TRAFFIC
SAFETY
COMMITTEES
*FIRST
RECOGNITION
DINNER*
September 27,
2001
Kingsley Inn**

- 10 of 12 Committees Attended (70 People)
 - Recognition by OHSP, RCOC, MDOT, TIA
 - Sponsored by Giffels-Webster Engineers
 - 10-11 traffic safety committees.
-

EDUCATION

***“EARLY
BIRDS”*
MEETINGS
Celebrating 29
Years**

- Contemporary traffic safety issues
 - Engineering
 - Law Enforcement
 - Federal and State Law Changes
 - New traffic safety devices
 - Use of Crash Data
 - Roundabouts
 - Single Point Intersections
 - Mature Driver Issues
 - 7 a.m. meetings over 70-100 people attend these meeting 3 times a year.
-

**MATURE
DRIVER ISSUE**

- 1988 – 1992: TIA launches retraining workshops based on crash data from Michigan and US - (*GRANT from OHSP/NHTSA*)
 - 1997 – 2003: Resurrected workshop with UFOV
 - 1999 – 2001: State of Michigan develops Strategic Plan
 - 1999 State of Michigan hosts “White House” Conference on Mature Driver Issues.
 - 2004 Michigan will host National Conference on Elderly Mobility - “*Best Practices Worldwide*”
 - Very involved in mature driver issue.
 - Larry and Frank are very much involved in 2004 conference.
-

**National
Population:**

- **Graph of elderly population as the baby boomers age.**
 - **Notice the increase in the elderly population as the baby-boomers age.**
 - Did you know that the elderly population is growing rapidly throughout the state and across the nation and the world? This first graph demonstrates what is commonly referred to as “squaring of the population.” While our society used to reflect a pyramid shape with a large base of younger people at the bottom and a small elderly population on top; we are quickly moving toward a society with many more older people and fewer younger people.
 - Conflict between older and younger drivers.
 - Issue with older drivers for keeping their mobility and independence.
-

**U.S. Driver
Fatality Rate by
Age (per 100
million miles of
travel)**

- **Graph with age range from 18 to 84.**
 - State’s mandatory graduated license law; young people’s rate going down.
-

**MATURE
DRIVER
WORKSHOP**

- Objectives
 - **DRIVER IMPROVEMENT PROGRAM**
 - **PHYSICO-PHYSICAL EVALUATIONS**
 - **ON-ROAD TEST EVALUATION**
 - Two and one-half day workshop.
 - 3 day workshops.
-

**MATURE
DRIVER
WORKSHOPS**

- **State and National Recognition**
 - **2003 Workshops - Michigan**
 - **UFOV Evaluators - Michigan**
 - ***Video - Young/Old Driver***
 - ***Video - Communities - engineering for this segment***
 - Confidential, self-evaluative program.
-

**MATURE
DRIVER
ISSUES**

- **Michigan Leadership**
 - **Statewide Strategic Plan to GTSAC**
 - **Progressive local and regional programs**
 - **Training and self-evaluation programs**
 - **Local engineering programs**
 - **National Conference on Elderly Mobility**
“Best Practices Worldwide”
September 12-15, 2004

(Continued on next page.)

- State of Michigan has been a leader in a host of transportation areas.
 - Michigan looked upon as one of three states with leadership.
-

**SEAT BELT
ISSUES/
ALCOHOL
ISSUES**

- **Advocate - primary enforcement legislation**
 - **Oakland County Safety Belt Surveys - 8 years**
 - **Promotion campaigns - value of safety belts**
 - **Click It or Ticket Campaign**
 - **Sobriety Courts**
 - **BAC - .08**
 - **New education programs - change behavior**
-

**... in
CONCLUSION**

- **Michigan has a model for implementing traffic safety management systems at the local level!**
 - Has a local traffic system mode; should we duplicate this model in different parts of the state?
 - TIA thinks it should.
-

**TRAFFIC
SAFETY**

- **Local Regional Issues:**
 - **Need for accurate and timely crash data**
 - **Need for local/regional organizations to implement a traffic safety management system; e.g., TIA**
 - **Requires this organization to analyze data and facilitate improvements throughout the community. (*Local communities do NOT have expertise*)**
 - **Need initial funding for new organization**
 - **Need to demonstrate organization's value to local agencies for their long-term funding support**
 - **Requires coordination with national, state, regional and local traffic safety goals**
 - Need accurate and timely data.
 - We provide MDOT with crash data.
 - Very few at the local level who can implement.
 - Need initial funding in a 2-3 year period.
-

Q&A

- Q Looking at mature drivers; length of time operating vehicle, state of health. Looking at current behaviors is a very poor if not useless predictor of future mature drivers; also on the gender issue more mature drivers will be female, we live longer.
- A Observation is correct, however, don't have an answer. Variety of different groups who don't have the answer; trying to find ways to communicate but you need to self-evaluate. We believe it's a medical condition; self-evaluate to see if their physical, cognitive abilities have changed. No perfect answer; what are other ideas that we can bring back home.
- Q Using crash data alone is limiting, also have to use at land use. Issue not driver behavior; crash data, law enforcement, responsible for land use for access management, we need to look at data in a broader context. Data will identify a problem but not give you the right solution. Data will help local people if there are problems and if land use issues should be corrected; data doesn't solve the problem, it's the beginning to finding the solution. Traditionally the data has not been available, do you have to be a member to access data?
- A A-UD10 is a form that all law enforcement has used. We as users would wait at least 12-18 months to get that data. Current system only locates 70-75%. Because of this, we asked if we could do it ourselves. In recent months the system is moving towards more accessibility of crash users.
-

Governors Traffic Safety Advisory Commission /Statewide Coordination

Expert Speaker: **Kathy Farnum, Planning Development Grant Manager
State Police (Office of Highway Safety Planning)**

GOVERNORS TRAFFIC SAFETY ADVISORY COMMISSION STATEWIDE COORDINATION

- **New organization within the last couple of years.**
 - **Heard common theme – need to coordinate.**
 - **Continue Michigan’s success – continue to work together.**
-

State Safety Commission

- **Established by statute in 1941**
 - **Comprised of five state agencies**
 - **Community Health, Education, State, State Police, Transportation**
 - This is a mechanism to continue to work together.
 - Statue required commission to meet every month.
 - To exchange safety information and encourage safety.
-

SAFETY MANAGEMENT SYSTEM

- **ISTEA Requirement**
 - **Leadership**
 - **Goal**
 - **Action Teams**
 - In 1991 ISTEA came along.
 - MDOT and OHSP worked together.
 - Accomplished 13 action teams.
 - There are two agencies in Michigan.
 - ISTEA taken away after a few years as we kept our safety management system.
-

Why Change?

- **Confusion and duplication of traffic safety efforts**
 - **A more dynamic mechanism needed**
 - **Develop centrally focused group**
 - Over time confusion was created between these two groups.
-

| | |
|------------------------------|--|
| GTSAC Organization | <ul style="list-style-type: none"> • Chart of Governor's Traffic Safety Advisory Commission (GTSAC) and Task Teams • May of 2002 Governor Engler signed an executive order replacing Traffic Safety Advisory Commission. • New to the commission was the local level – county, city and township levels. • OHSP – administrator of commission. • Include the 4 E's . • Two- way communication. • Task teams are created temporarily to address issues. |
| GTSAC Mission | <ul style="list-style-type: none"> • <i>The Governor's Traffic Safety Advisory Commission serves as the state's major forum for identifying key traffic safety challenges and developing and implementing action plans to address those issues. In addition, the Commission focuses on traffic crash data acquisition, storage and management issues within the state.</i> |
| GTSAC Goal | <ul style="list-style-type: none"> • Provide leadership in the identification of state and local traffic safety issues and promote recommended strategies to address them. |
| GTSAC PRIORITY AREAS | <ul style="list-style-type: none"> • Traffic records • Elderly mobility • Intersection safety • Planning and evaluation • Summit • Legislation • 2002 Traffic Safety Summit in partnership with MDOT. • Asked to list most important traffic safety issues in Michigan. • Issues as adopted and has been assigned task teams. |
| GTSAC Accomplishments | <ul style="list-style-type: none"> • Crash process redesign project • Traffic Safety Summit • Transportation Research Board and USDOT workshops • GTSAC web site/Listserv • Elderly Mobility Conference • 2003 Summit participant and also 2004. • Web site – meeting dates, locations, etc. Website through OHSP. • Opportunity before meetings to develop agenda. • Provide updates on traffic crash data and other safety issues. • Is a participant in the Elderly Mobility Conference. • Long term goal was identified; that each agency would participate in |

(Continued on next page.)

conference according to their roles and responsibilities.

- Michigan is on the forefront of traffic safety.
 - Mechanism in place to develop a highway safety plan.
 - Help with the flexibility of the legislation.
 - Framework of the metro area; help them get access to their crash data for each of the MPO regions. Use this information as a starting point for a traffic safety forum in their areas.
-